

ABSTRACT OF THE DISCLOSURE

Embodiments of the invention include an ion exchange polish pad for polishing a semiconductor substrate, on which various conductive, semiconductive, and/or insulative layers are formed, for example a conductive copper layer. Embodiments also include the methods for the manufacture of an ion exchange polish pad. In certain embodiments an ion exchange polish pad includes a base material and a ion exchange layer including, which further includes an ion exchange material. Cations in the ion exchange material may be exchanged with other cations, such as copper, under the proper process conditions for the planarization of a processed semiconductor substrate.